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FROM THE HOOSIER NATURALIST.

THE HOOSIER NATURALIST.

VOL. II. No. 10. VALPARAISO, IND., MAY, 1887. } PUBLISHED MONTHLY.
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Birds of Monroe County, Indiana.

BY BARTON W. EVERMANN, INDIANA STATE
NORMAL SCHOOL.

Monroe county, Indiana, lies southwest of Indianapolis about 60 miles, and about 100 miles north of Louisville, Ky. The county lies in the limestone region of the south-central part of the state, and has a somewhat broken surface. Indeed, the hills about Bloomington (the county seat), and to the eastward, attain a considerable size. From Bloomington eastward the country grows more and more broken and the hills higher and more rugged as we near Brown county, where we find Weed Patch hill, the highest hill in the state, and "Bear Wallow," of almost equal height. Except where farms have been cleared there are heavy growths of timber, chiefly hard maple, beech, oak, walnut, tulip (poplar), etc. The west fork of White river forms the northwest boundary of the county for a few miles. The other streams, Bean Blossom creek, Griffith creek, and Salt creek, are all small and unimportant, and furnish but little inducement to water-birds to stop in the county. This list will therefore be found to contain but few of such species as frequent larger streams or lakes.

The observations upon which this list is based were made chiefly by the writer and others connected with the State university either as professors or students. Only such species as have been certainly identified as belonging to the avi-fauna of Monroe county are admitted to a place in the list. Unless otherwise expressly

stated, the writer is responsible for the species included. When the identification or capture was made by another, due credit is given. In this connection, I desire to express my obligations to Messrs. Chas. H. Bollman, W. S. Blatchley and G. G. Williamson for their valuable assistance in studying the migrations of birds through this county and in determining the permanent and summer residents.

The present paper is little more than a bald list of the species identified, it being the purpose at another time to add fuller notes as to the relative abundance, distribution, migration, etc., of each species.

In nomenclature and classification the A. O. U. code and check-list of N. A. birds has been strictly followed. The dates given are those upon which specimens were seen and generally indicate first arrivals.

1. *Cotilymbus podiceps* (L.). Pied-billed Grebe.

Not often seen.

2. *Merganser americanus* (Cass.). American Merganser.

Not common.

3. *Anas boschas* L. Mallard.

Not common. Several seen March 5, 1886.

4. *Anas carolinensis* Gmelin. Green winged Teal.

Not common. A few seen March 5.

5. *Spatula clypeata* (L.). Shoveller.

Not common. One obtained by Mr. Blatchley in Clear creek, May 8, 1886.

6. *Dafla acuta* (L.). Pintail.

Apparently rare. One obtained in

little creek near the college campus, February 26, 1886.

7. *Aix sponsa* (L.). Wood-Duck.

This is probably the most common duck here.

8. *Aythya affinis* (Eyt.). Lesser Scaup Duck.

Rare. One seen in White river at Gosport, May 8, 1886; several were seen in Clear creek, on same day, by Mr. Blatchley.

9. *Charitonetta albeola* (L.). Buffalo-head.

Very rare. One seen March 6.

10. *Branta canadensis* (L.). Canada Goose.

Seen occasionally flying over.

11. *Botaurus lentiginosus* (Montag.). American Bittern.

Not often seen. May 5, 1886.

12. *Ardea herodias* L. Great Blue Heron.

Not common.

13. *Ardea egretta* Gmel. American Egret.

A few are seen along the creeks in August, but I have never noted it in the spring except this year. One killed near Bloomington, April 10, 1887.

14. *Ardea virescens* L. Green Heron.

More common than either of the preceding. It nests in a grove of pines west of town.

15. *Porzana carolina* (L.). Sora Rail.

Not often seen. May 5, 1886; April 15, 1887.

16. *Porzana noveboracensis* (Gmel.). Yellow Rail.

The only specimen ever taken in this county, so far as I know, was captured alive in a marsh near Bloomington, some time in August, 1885.

17. *Fulica americana* Gmel. American Coot.

Not common.

18. *Philohela minor* (Gmel.). American Woodcock.

Rare migrant. One specimen taken in spring of 1885 by Mr. Foster Hight.

19. *Gallinago delicata* (Ord). Wilson's

Snipe.

A rather common migrant. April 15 and 18.

20. *Tringa maculata* Vieill. Pectoral Sandpiper.

Migrant, not common. March 15 and 26.

21. *Tringa minutilla* Vieill. Least Sandpiper.

A rare migrant.

22. *Ereunetes pusillus* (L.). Semipalmated Sandpiper.

A rare migrant.

23. *Totanus solitarius* (Wils.). Solitary Sandpiper.

A rare migrant.

24. *Actitis macularia* (L.). Spotted Sandpiper.

A rare summer resident.

25. *Agialitis vocifera* (L.). Killdeer.

A rather common summer resident—arrives about March 7. Some remain in the fall until last of November.

26. *Colinus virginianus* (L.). Bob-white.

Formerly a common resident, but now very scarce.

27. *Bonasa umbellus* (L.). Ruffed grouse.

Frequently seen among the hills east and northeast of Bloomington. Rather common among the Brown county hills.

28. *Meleagris gallopavo* L. Wild Turkey.

Not seen by me, but it was at one time common in the county, and is still occasionally seen in the wilder parts of the county.

29. *Ectopistes migratorius* (L.). Passenger Pigeon.

Formerly very abundant during the migrations, but far from common now.

30. *Zenaidura macroura* (L.). Mourning Dove.

A common summer resident. Occasionally a few remain all winter. February 23, 1886. Becomes common by the middle of March.

31. *Cathartes aura* (L.). Turkey Vulture.

A common resident except during a few weeks in midwinter. Full sets of

eggs found as early as April 17. February 22, 1886.

32. *Elanoides forficatus* (L.). Swallow-tailed Kite.

A rare visitant. One was shot on Bean Blossom creek, north of town, August 18, 1885. Another was reported as seen at the same time. This specimen, which is now in my collection, is, as far as I know, the only one of this species ever secured in the county or this part of the state.

33. *Circus hudsonius* (L.). Marsh Hawk. Migrant, rare.

34. *Accipiter velox* (Wils.). Sharp-shinned hawk.

Rare.

35. *Accipiter cooperi* (Bonap.). Cooper's Hawk.

Summer resident, but apparently not common.

36. *Buteo borealis* (Gmel.). Red-tailed Hawk.

Common resident—most numerous during the breeding season.

37. *Buteo lineatus* (Gmel.). Red-shouldered Hawk.

Perhaps as common as *B. borealis*.

38. *Aquila chrysaetos* (L.). Golden Eagle. A rare winter visitor.

39. *Haliaeetus leucocephalus* (L.). Bald Eagle.

A winter visitant—somewhat more common than the preceding.

40. *Falco columbarius* L. Pigeon Hawk.

Rare. One specimen obtained by G. G. Williamson in the fall of 1885. April 8, 1886.

41. *Falco sparverius* L. Sparrow Hawk.

Resident; rare during the winter but common at other times.

42. *Pandion haliaetus carolinensis* (Gmel.). Fish Hawk.

Seen occasionally in spring along the White river.

43. *Asio wilsonianus* (Less.). Long-eared Owl.

Not often seen. One or two specimens

were obtained in the fall from Turner's pine grove.

44. *Asio accipitrinus* (Pall.). Short-eared Owl.

Apparently very rare. Two specimens secured last fall are the only ones ever taken in the county.

45. *Syrnium nebulosum* (Forst.). Barred Owl.

This owl is a rather common resident.

46. *Nyctalu acadica* (Gmel.). Saw-whet Owl.

The only specimen of this species that has been taken was caught on Thanksgiving day, 1886, in the engine house of the university.

47. *Megascops asio* (L.). Screech Owl. A common resident.

48. *Bubo virginianus* (Gmel.). Great Horned Owl.

Perhaps the most common resident owl.

49. *Coccyzus americanus* (L.). Yellow-billed Cuckoo.

A common summer resident. May 5, 1886.

50. *Coccyzus erythrophthalmus* (Wils.). Black-billed Cuckoo.

Of late years, apparently a more common summer resident than the other species. May 13, 1882.

51. *Ceryle alcyon* (L.). Kingfisher.

Summer resident. But few are seen except along White river. April 25, 1886.

52. *Dryobates villosus* (L.). Hairy Woodpecker.

53. *Dryobates pubescens* (L.). Downy Woodpecker.

Both of these familiar birds are common residents.

54. *Sphyrapicus varius* (L.). Yellow-bellied Woodpecker. Seen frequently in spring and late fall. Probably a rare resident. March 26, 1886.

55. *Ceophloeus pileatus* (L.). Pileated Woodpecker.

This large bird is a very rare species in the county. In the fall of 1885, two specimens were secured from the heavy

timber near Bean Blossom creek. This, I believe, is the only recent record for the county.

56. *Melanerpes erythrocephalus* (L.). Red-headed Woodpecker.

Very abundant in summer and frequently a common winter resident. During the present winter it has been quite common.

57. *Melanerpes carolinus* (L.). Red-bellied Woodpecker.

Resident, but much less common than the preceding.

58. *Colaptes auratus* (L.). Yellow-hammer.

A common resident.

59. *Antrostomus vociferus* (Wils.). Whip-poor-will.

Summer resident, but seemingly not common.

60. *Chordeiles virginianus* (Gmel.). Nighthawk.

An abundant migrant, especially noticeable in the fall. May 6, 1886.

61. *Chetura pelagica* (L.). Chimney Swift.

An abundant summer resident. In early fall vast numbers are in the habit of spending the night in the tall chimney of the University engine house. April 11, 1886.

62. *Trochilus cobubris* L. Hummingbird.

A common summer resident. May 13, 1882.

63. *Tyrannus tyrannus* (L.). Kingbird.

A common summer resident. April 16, 1886.

64. *Myiarchus crinitus* (L.). Great-crested Flycatcher.

Summer resident, common. April 23, 1886.

65. *Sayornis phoebe* (Lath.). Pewee.

A common summer resident, arriving as early as March 1. April 21, 1882.

66. *Contopus virens* (L.). Wood Pewee.

A common summer resident. April 28, 1886.

67. *Empidonax flaviventris* Bd. Yellow-

bellied Flycatcher.

Migrant, but not common.

68. *Empidonax acadicus* (Gmel.). Acadian Flycatcher. An abundant summer resident, arriving about April 15.

69. *Empidonax pusillus traillii* (Aud.). Traill's Flycatcher.

A not very common summer resident.

70. *Empidonax minimus* Bd. Least Flycatcher.

Summer resident, but not common.

71. *Otocoris alpestris praticola* Hensh. Prairie Horned Lark.

A frequent winter visitor. A few probably breed in the county. I have seen very large flocks in the meadows west of town during cold weather.

72. *Cyanocitta cristata* L. Blue Jay.

A common resident. Begins to nest as early as April 1.

73. *Corvus corax sinuatus* (Wagl.). American Raven.

Formerly a common resident, but now very rare.

74. *Corvus americanus* Aud. American Crow.

An abundant resident. Nests as early as March 20.

75. *Dolichonyx oryzivorus* (L.). Bobolink.

A rather rare spring migrant. Several were seen May 6, 1882, and others May 8, 1886.

76. *Molothrus ater* (Bodd.). Cowbird.

A common summer resident. Among the victims of the Cowbirds' parasite habits, I have noticed the following: Cardinal Grosbeak, Towhee, Red-eyed Vireo, Scarlet Tanager, Wood Thrush, Acadian Flycatcher, Indigo Bird, Oven Bird, Worm eating Warbler and Summer Yellowbird.

77. *Agelaius phoeniceus* (L.). Red-winged Blackbird.

A summer resident, but not at all common, owing to the almost entire absence of ponds and marshes.

78. *Sturnella magna* (L.). Meadow Lark.

An abundant summer resident, usually returning from the south about Feb. 24.

79. *Icterus spurius* (L.). Orchard Oriole.

A common summer resident, becoming more and more common each year.

80. *Icterus galbula* (L.). Baltimore Oriole.

A common summer resident. The dates for its appearance in spring, at Bloomington, for the past four years, are: April 20, 21, 20 and 21.

81. *Scolecophagus carolinus* (Mull.). Rusty Blackbird.

A rare spring and fall migrant.

82. *Quiscalus quiscula aeneus* (Ridgw.). Bronzed Grackle.

A very abundant summer resident. Usually a few remain all winter.

83. *Carpodacus purpureus* (Gmel.). Purple Finch.

A frequent winter visitor.

84. *Loxia curvirostra minor* (Brehm.). American Crossbill.

Not until the winter of 1882-3 was this species ever noticed at Bloomington. The first were seen by me on February 10, 1883, when a few specimens were secured. Since then it has been a visitor to the pine grove west of town, about every winter. During the winter of 1883-4 it was unusually common. A few were seen on July 10, 13 and 14, 1886, by Mr. C. H. Bollman. It hardly seems probable, however, that the species breeds in this vicinity.

85. *Loxia leucoptera* Gmel. White-winged Crossbill.

On February 6, 1883, I shot two males of this species from a flock of fifteen that were feeding under the pine trees in the yard of Mr. Joshua Howe on College Avenue. On the 10th of same month I secured a female from Turner's Grove. Two other females were shot a few days later. These are, so far as I have been able to learn, the first White-winged Crossbills ever taken in the state. None have been seen at Bloomington since the early spring of 1883. It may, therefore, be regarded as a very rare winter visitor.

86. *Acanthis linaria* (L.). Redpoll.

A very rare winter visitant. One was seen in December, 1882.

87. *Spinus tristis* (L.). American Goldfinch.

A very common species during the summer, and not uncommon throughout the year.

88. *Spinus pinus* (Wils.). Pine Finch.

First noticed February 6, 1883, in company with the White-winged Crossbills. Several were then seen. Since then it seems to be not rare as a winter and early spring visitor.

89. *Centrophanes lapponicus* (L.). Lapland Longspur.

A very rare visitant. One gotten February 10, 1883, from a flock of Shore Larks, and another February 12, from a flock of two or three hundred Shore Larks. Others were doubtless in the flock, but they could not be distinguished at long range. These, I believe, are the only records for southern Indiana.

90. *Poocates gramineus* (Gmel.). Vesper Sparrow.

An abundant summer resident, arriving about March 25.

91. *Ammodramus sandwichensis savanna* (Wils.). Savanna Sparrow.

Migrant; not common.

92. *Ammodramus savannarum passerinus* (Wils.). Grasshopper Sparrow.

Rather common summer resident. April 25, 1886.

93. *Chondestes grammacus* (Say). Lark Finch.

A rare summer resident.

94. *Zonotrichia leucophrys* (Forst.). White-crowned Sparrow.

This sparrow is a common migrant in early spring and late fall.

95. *Zonotrichia albicollis*. (Gmel.). White-throated Sparrow.

A common migrant with the preceding.

96. *Spizella monticola* (Gmel.). Tree Sparrow.

Winter resident,—some years very abundant.

97. *Spizella socialis* (Wils.). Chipping Sparrow.

A common summer resident.

98. *Spizella pusilla* (Wils.). Field Sparrow.

A common summer resident.

99. *Junco hyemalis* (L.). Slate-colored Junco.

An abundant winter resident.

100. *Peuceea aestivalis bachmanii* (Aud.). Bachman's Sparrow.

This interesting sparrow is a rare summer resident of the county. Two sets of eggs have been secured and perhaps a half dozen birds taken.

101. *Melospiza fasciata* (Gmel.). Song Sparrow.

Resident; abundant in summer.

102. *Melospiza lincolni* (Aud.). Lincoln's Sparrow.

Rather rare migrant.

103. *Melospiza georgiana* (Lath.). Swamp sparrow.

Migrant,—not common.

104. *Passerella iliaca* (Merr.). Fox Sparrow.

A common early spring migrant. March 14, 1886.

105. *Pipilo erythrophthalmus* (L.). Towhee.

An abundant bird in summer, and a few are found to winter in favorable situations.

106. *Cardinalis cardinalis* (L.). Cardinal.

A common resident.

107. *Habia ludoviciana* (L.). Rose-breasted Grosbeak.

Not uncommon during migrations, but rare during the summer. April 23, 1886.

108. *Passerina cyanea* (L.). Indigo Bunting.

An abundant summer resident. April 24, 1886; May 13, 1882.

109. *Spiza americana* (Gmel.). Dickcissel.

Summer resident,—common.

110. *Piranga erythromelas* Vieill. Scarlet Tanager.

Moderately common summer resident. May 6, 1882; April 22, 1886.

111. *Piranga rubra* (L.). Summer Red-

bird.

A common summer resident. I do not know that this species has been seen further north in the state, except at Terre Haute. April 28, 1886.

112. *Progne subis* (L.). Purple Martin.

A common summer resident in the city. March 28, 1886.

113. *Petrochelidon lunifrons* (Say.). Cliff Swallow.

A rather common summer resident.

114. *Chelidon erythrogaster* (Bodd.). Barn Swallow.

Summer resident,—common.

115. *Tachycineta bicolor* (Vieill.). White-bellied Swallow.

Spring and fall migrant; not often seen.

116. *Clivicola riparia* (L.). Bank Swallow.

A common summer resident.

117. *Stelgidopteryx serripennis* (Aud.). Rough-winged Swallow.

Summer resident; not common about Bloomington, but abundant on the White River at Gasport, where nearly completed nests were found May 8, 1886.

118. *Ampelis cedrorum* (Vieill.). Cedar Waxwing.

A common summer resident. Flocks of ten to twenty frequently seen about the city.

119. *Lanius ludovicianus excubitorides* (Sw.). White-rumped Shrike.

Apparently a rare resident.

120. *Vireo olivaceus* (L.). Red-eyed Vireo.

A familiar and abundant summer resident. April 23, 1886.

121. *Vireo philadelphicus* (Cass.). Greenlet.

A rare summer resident.

122. *Vireo gilvus* (Vieill.). Warbling Vireo.

A common summer resident. April 26, '86.

123. *Vireo flavifrons* Vieill. Yellow-throated Vireo.

A common migrant. April 17, 1886.

124. *Vireo noveboracensis* (Gmel.). White-eyed Vireo.

A rare summer resident.

125. *Mniotilta varia* (L.). Black-and-white Creeper.

Summer resident, frequent along streames.

126. *Helminthus vermicorus* (Gmel.). Worm-eating Warbler.

This beautiful and interesting warbler seems to be a rather common summer resident here. I have seen several specimens, particularly among the hills north-east of the city, where, on May 13, 1886, I found a nest containing five eggs of this species and two of the cowbird. Mr. W. S. Blatchley found a nest of six and one cowbird one day earlier. Both of these nests were situated on a hillside and in each case at the base of a small shrub. All the eggs were fresh. Returned from south May 4, or earlier.

127. *Helminthophila pinus* (L.). Blue-winged Yellow Warbler.

Common during the spring migrations and probably a rare summer resident. April 27, 1886.

128. *Helminthophila chrysoptera* (L.). Blue Golden-winged Warbler.

A rare migrant. One shot by G. G. Williamson.

129. *Helminthophila ruficapilla* (Wils.). Nashville Warbler.

Common spring and fall migrant. April 27.

130. *Helminthophila peregrina* (Wils.). Tennessee Warbler.

Spring and fall migrant, but apparently less common than the preceding.

131. *Compsothlypis americana* (L.). Blue Yellow-backed Warbler.

Migrant, but not often noticed.

132. *Dendroica tigrina* (Gmel.). Cape May Warbler.

A rather rare migrant.

133. *Dendroica aestiva* (Gmel.). Summer Yellowbird.

Common in the spring, and a few breed. May 1, 1886.

134. *Dendroica caerulescens* (Gmel.). Black-throated Blue Warbler.

Spring and fall migrant, not common.

135. *Dendroica coronata* (L.). Yellow-

rumpled Warbler.

This is the only one of the warblers which is a winter resident in this part of the state. Several specimens were seen west of the city February 10, 1883; March 15, 1886; February, 1887.

136. *Dendroica maculosa* (Gmel.). Black-and-yellow Warbler.

A common spring migrant.

137. *Dendroica caerulea* (Wils.). Cerulean Warbler.

An abundant spring migrant. April 27, 1886.

138. *Dendroica pennsylvanica* (L.). Chestnut-sided Warbler.

A common spring migrant. May 4, '86.

139. *Dendroica castanea* (Wils.). Bay-breasted Warbler.

Spring migrant, not so common as the last. May 4, 1886.

140. *Dendroica striata* (Forst.). Black-poll Warbler.

Spring migrant, not very common.

141. *Dendroica blackburnae* (Gmel.). Blackburnian Warbler.

Spring migrant, but not common. April 27, 1886.

142. *Dendroica dominica albiflora* Baird. Sycamore Warbler.

Not uncommon summer resident, breeding near water-courses. April 16, 1886.

143. *Dendroica virens* (Gmel.). Black-throated Green Warbler.

An abundant spring and fall migrant. May 4, 1886.

144. *Dendroica palmarum* (Gmel.). Yellow Red-poll Warbler.

Common spring migrant. May 6, 1885.

145. *Seiurus aurocapillus* (L.). Golden-crowned Thrush.

A common summer resident. April 24, 1886.

146. *Seiurus noveboracensis* (Gmel.). Water Thrush.

A rare migrant; probably breeds.

147. *Seiurus motacilla* (Vieill.). Large-billed Water Thrush.

Probably a rare summer resident.

148. *Geothlypis formosa* (Wils.). Kentucky Warbler.

A not infrequent summer resident. Found breeding on the hillsides north-east of town. May 6, 1886.

149. *Geothlypis agilis* (Wils.). Connecticut Warbler.

A rare spring migrant.

150. *Geothlypis trichas* (L.). Maryland Yellow-throat.

A common summer resident. April 28, 1886.

151. *Icteria virens* (L.). Yellow breasted Chat.

152. *Sylvania mitrata* (Gmel.). Hooded Flycatching Warbler.

Rare spring migrant. May 8, 1886.

153. *Sylvania pusilla* (Wils.). Black-capped Flycatching Warbler.

A rare migrant. May 8, 1886.

154. *Sylvania canadensis* (L.). C. a - an Flycatching Warbler.

Spring migrant,—more common than the two preceeding. April 27, 1886.

155. *Setophaga ruticilla* (L.). American Redstart.

Usually a common summer resident, but very few were seen in 1885 and 1886.

156. *Mimus polyglottos* (L.). Southern Mockingbird.

This southern species appears to be a very rare summer resident about Bloomington. The only individual I ever saw in the county was noticed in the cemetery west of town April 29, 1882 (*Vide* Ornithologist and Oologist for April, 1883). Mr. Chas. H. Bollman has seen it on one or two occasions, I believe.

157. *Galeoscoptes carolinensis* (L.). Catbird.

A common summer resident. April 18, 1886.

158. *Harporhynchus rufus* (L.). Brown Thrasher.

A common summer resident. March 28, 1886. Full sets of eggs May 22, 1882.

159. *Thryothorus ludovicianus* (Lath.). Carolina Wren.

Permanent resident, not very common.

160. *Thryothorus bewickii* (Aud.). Bewick's Wren.

A rather common summer resident.

161. *Troglodytes aedon* Vieill. House Wren.

Summer resident, less common than Bewick's.

162. *Troglodytes hiemalis* Vieill. Winter Wren.

Winter resident, not rare.

163. *Cistothorus palustris* (Wils.). Long-billed Marsh Wren.

Migrant, not common. May 13, 1886, one seen.

164. *Certhia familiaris americana* (Bonap.). Little Brown Creeper.

Frequently seen in the winter and early spring.

165. *Sitta carolinensis* L. White-bellied Nuthatch.

A common permanent resident.

166. *Sitta canadensis* L. Red-bellied Nuthatch.

Apparently a rare winter visitant,—seen oftenest in Turner's Grove. February 10, 1883.

167. *Parus bicolor* L. Tufted Titmouse. An abundant permanent resident.

168. *Parus atricapillus* L. Black-capped Chickadee.

169. *Parus carolinensis* Aud. Long-tailed Chickadee.

These two forms seem to be almost equally common,—both being permanently resident.

170. *Regulus satrapa* Licht. Golden-crowned Kinglet.

Rare winter resident. Feb. 10, 1884.

171. *Regulus calendula* (L.). Ruby-crowned Kinglet.

This with the preceding is occasionally seen in winter in Turner's grove, and in early spring both are rather common migrants.

172. *Poliophtila caerulea* (L.). Blue-gray Gnatcatcher.

Common summer resident. April 12, '86.

173. *Turdus mustelinus* Gmel. Wood Thrush.

A common summer resident. Eggs May 6, 1886.

174. *Turdus fuscescens* Steph. Wilson's Thrush.

Spring and fall migrant, moderately

common, May 13, 1886.

175. *Turdus aliciae* Baird. Gray-cheeked Thrush.

Common migrant.

176. *Turdus amulashkæ pallasi* (Cab.). Migrant.

177. *Merula migratoria* (L.). American Robin.

An abundant summer resident, and a rare permanent resident in protected places. Full sets of eggs found as early as May 5. Few seen Feb. 10, 1883, and a great number, perhaps 500, Feb. 16, of same year.

178. *Sialia sialis* (L.). Bluebird.

An abundant summer resident. A few remain all winter in suitable places. Jan. 12, 1883; Jan. 1, and 3, 1887. Full set eggs found April 4, 1882.

A Springtime Memory.

Between low lines of dark and thorny hedge
The lonely road outstretches far away
O'er little hills and plains, and oft the sedge
And rough-built bridge reveal where
some brooks stray

From field to field across the farms. Not gay
Is Nature's garb, yet coming loveliness
Is hinted at, tho' March is never May,
But, after winter's pallor, this new dress
Is bright with glad foreknowledge how the
year shall bless.

Somewhere mid yonder orchard's apple
trees

There lurk the messengers that blithely tell
The meaning of this warm and balmy
breeze,

And why those lambskins frisk, why young
buds swell,

Why o'er the greening grass the sunlight
fell

So pleasantly just now. No russet wing
Nor scarlet breast I see, yet winter's knell
Is echoed in that robin's chirruping;—

Alas! the song is sadder than it was one spring.

There is a certain narrow path that leads
Down to a lane unfrequented by teams.
The chirp, chirp of yon robin quickly
speeds

Fond memory to that dear place which
seems,

In moonlit summer nights, fit home of
dreams.

Ah! when in springtimes of the long ago,
Reviving in the sun's returning beams,
The earth rose beautiful from tomb of
snow,

Beside that orchard path bird songs ne'er
told of woe. T. G. LAMOILLE.

Suggestions for Forming Collections of Birds' Eggs.

BY ALFRED NEWTON.

(Continued from Page 124.)

CONCLUDING OBSERVATIONS.

The collector should steadily refuse any but the most trifling remuneration for nests or eggs taken and brought to him. As a rule, the eggs of the different species of plovers and sandpipers (*Charadriadae* and *Scelopacidae*) are those most wanted by oologists of all countries. These birds mostly breed in high northern latitudes, but they often choose elevated spots for nesting in more southern parallels. Their nests are nearly always difficult to find, even when the birds are discovered. Their habit is, if the ground be at all rough with herbage, to run off the nest for some distance before taking wing, as the observer approaches; if the ground be bare, they will try to escape observation until they are almost trodden upon. The best method of finding them, and indeed the nests of some other species, is for the collector to conceal himself near the place where he has reason to believe the eggs are, and to endeavor to watch the bird as she returns to her nest—using a telescope, if necessary; but should this fail, after giving her time to settle herself upon it, to fire off a gun suddenly, or spring up and shout, when the bird, in her surprise, will often at once take wing from the nest, or at least without running many yards. To reach the nests of rock-building birds, a man or boy can be lowered by a rope from the top, when it is accessible. The rope should always be tied under the arms of the person lowered, as substitutes, detached from above by the friction of the rope, may, by falling on him, stun him for a moment, and cause him to lose his hold. But in all places and at all times an egg-collector should recollect that identification and authentication are his main objects, to attain which no trouble is too laborious, no care

too great.

In last issue, *fig. 4a* represents a piece of thin wire long enough to pass entirely through the tubes, which should be always kept at hand by the operator, to remove obstructions likely to occur from small pieces of the embryo, or half-dried yolk, being accidentally drawn into the tubes or blowpipes.

Fig. 8, in last issue, shows a piece of paper, a number of which, when gummed on to an egg, one over the other, and left to dry, strengthen the shell in such a manner that the embryo scissors can be introduced through the aperture in the middle and worked to the best advantage, and thus a fully formed embryo may be cut up, and the pieces extracted through a very moderately sized hole; the number of thicknesses required depends of course greatly upon the size of the egg, the length of time it has been incubated, and the stoutness of the shell and the paper. Five or six is the least number that it is safe to use. Each piece should be left to dry before the next is gummed on. The slits in the margin cause them to set pretty smoothly, which will be found very desirable; the aperture in the middle of each may be cut out first, or the whole series of layers, may be drilled through when the hole is made in the egg. For convenience sake the papers may be prepared already gummed, and moistened when put on (in the same way that adhesive postage labels are used). Doubtless, patches of linen or cotton cloth would answer equally well. When the operation is over, a slight application of water (especially if warm), through the syringe, will loosen them so that they can be separated from one another and dried to serve another time. The size represented in the sketch, (*Fig. 8*, last month.) is that suitable for an egg of moderate dimensions, such as that of a common fowl.

Observations—The most effective way of adapting this method of emptying eggs, is by using *very many layers of thin*

paper and plenty of gum, but this is of course the most tedious. Nevertheless, it is quite worth the trouble in the case of really rare specimens, and they will be none the worse for operating upon from the delay of a few days, caused by waiting for the gum to dry and harden. The naturalist to whom this method, first occurred, has found it answer remarkably well in every case that it has been used, from the egg of an eagle to that of a humming bird, and among English oologists it has been generally adopted.—*Extract from Smithsonian Bulletin No. 139.*

GEOLOGY.

This department is conducted by W. R. Lighton, Leavenworth, Kan. All inquiries and communications under this head should be addressed to him.

Economic Geology.

FIFTH PAPER—LIME AND CEMENT.

In this paper I shall make some few suggestions which I hope may be of assistance to you in the determination of the value of the materials which are used in the manufacture of Lime and Cement.

What is called "Quick-lime" or the lime of commerce, for making the mortar used in ordinary masonry, is, as you probably know, made from the common "limestone" which occurs so abundantly in all of our stratified deposits in this country. The process of manufacture is this. The limestone is what the mineralogist calls a Carbonate of Lime, or a combination of Carbonic Acid and lime.

To make the quick-lime this rock is piled up loosely in a large furnace or kiln, fire is built beneath it and the limestone is heated to a considerable degree, by which operation the Carbonic Acid is liberated and driven off in the form of gas and the lime remains. This is not a simple element, but an oxide, or a union of oxygen with the metal, calcium.

Here then, we have quick-lime. Among the curious characteristics of this mineral is its capability of absorbing and uniting with itself a quantity of water,

which union, as I have told you before in this series of papers, is what the mineralogist means when he speaks of a mineral being "hydrated". In popular language this process in lime is called "slaking". If you will pour water upon quick lime you will see this process going on, the two uniting so violently as to generate a great amount of heat and steam. When quick-lime is exposed to the action of the atmosphere it becomes "air-slaked" by the absorption of moisture from the air.

In making mortar, quick-lime is mixed with water, together with quartz sand. The silica or quartz loses its fixed character in the presence of the lime, and a union of the quartz and lime occurs, and this, when it has been allowed to dry and harden is in a measure unaffected by water. When we know just what the action is which takes place we see that the firmness and consequent value of the mortar must depend upon how completely the lime and quartz are combined, and we can see that the combination is rendered more perfect and complete by the use of a fine grained sand than by the use of a coarse grained one.

In the manufacture of lime to be used for this purpose it is necessary that a pure limestone be used, that is, one which is free from any admixture of foreign substances which would, upon the burning of the stone, render the lime less pure. Many of our extensive beds of limestone are what is called dolomitic or magnesian limestone, that is, they are composed of a compound carbonate of lime and magnesia, and many times this material is burned for quick-lime, but the lime is not of so great value as if obtained from a pure lime-stone. The physical structure is so much alike in the pure lime-stone and the magnesian variety that it is difficult to distinguish between them without making a full chemical analysis, but they may be distinguished with some degree of certainty by putting a fragment of the stone into a dilute

solution of muriatic acid. In the case of the magnesian limestone the action of the acid is more slow and the effervescence or liberation of the carbonic acid in the stone is less free than in the pure limestone.

There is a limestone of a peculiar character and composition called "Hydraulic cement" which has the property of "setting" or becoming solid in water, and it is from this property that it gets its name.

The stone consists of carbonate of lime together with silica or quartz in a finely divided or powdered condition, and also alumina or clay, and sometimes it is magnesian as well.

The making of lime from this stone is carried on just as is the making of ordinary lime, the stone being burned to drive off the carbonic acid. The peculiarities of the stone are not yet fully understood. Many times two beds which appear upon chemical analysis to be nearly or quite identical will produce very unlike results upon being made into cement, this seeming to depend quite largely upon the physical nature of the stone and the manner of treatment. Many stones in which the proportions of these materials—carbonate of lime, silica, clay, etc. vary considerably yet possess hydraulic properties, so it may be said that the only really reliable test of the value of a hydraulic limestone is the practical one of making it into cement and submitting this to the actual trial. It is safe, though, when you have found a limestone containing silica and clay to experiment with it upon the supposition that it possesses the desired properties.

When we remember that in the case of common mortar that in which very fine grained sand is used is the best fitted to withstand the action of water when it has set, it is only rational to suppose that the hydraulic property of the cement in question is due to the existence of the silica in an extremely fine state, and also to the presence of the clay, which you

will remember is a *silicate*.

Plaster of Paris is not very extensively used as a cement, but I shall speak of it as a product of one of the salts of lime which possesses peculiar characteristics of the nature which we are discussing. Plaster of Paris is made by the burning of gypsum or sulphate of lime, just as lime-stone is burned in making quick-lime. The sulphuric acid is driven off by the heat and the product when ground into plaster and mixed with water, will "set" as does the hydraulic cement before mentioned. This material is extensively used as a fertilizer for poor soils, but is little used as a cement or plaster, its principal value being in the making of castings and in decorative work.

Gypsum is sometimes, more especially when granular or massive, difficult to distinguish in appearance from the common carbonate of lime, but the test with muriatic acid is a simple and sure one, as the gypsum will not effervesce as does the limestone under the acid. Another test may be made with the blowpipe; the gypsum will whiten and crumble easily at a low degree of heat, while it requires a considerable greater heat to reduce the carbonate.

W. R. L.

Spiders Eyes.

The more you study into things, the more wonders you will find, even in things so small as the eyes of a spider. Eight is the usual number a spider has, and in each branch of the family they are differently arranged to suit their way of life. Those which live in caves, or dark holes, and need to see only before them, have all the eyes in a group on the front of the head. Spiders which live in a web have the eyes raised so they can see all about them, and those of the family which travel about and hunt their prey have them more scattered. They are very beautiful, too—looking under a microscope like round, polished diamonds.
—*Ec.*

An Aerial Village.

Just across the Kankakee river, some twenty miles from Valparaiso, and in the center of a dismal swamp, is an aerial village. A village among the trees; the dwellings being from fifty to seventy feet up, with from one to six and seven in a tree, according to its size. The ground, for miles and miles (along the river,) is, at this season of the year covered with deep, cold water. The closeness of the trees, together with a tangled growth of high underbrush, makes it impossible to see very far in any particular direction. Locomotion is extremely slow and difficult for pedestrians, although the residents of the village move in and out with the greatest of ease.

The people living along the bluffs, have frequently heard of this peculiar village, though none could be found who had ever visited it. Consequently the instructions we received for reaching the place were rather meager. However, after laboriously wandering for several hours (not more than a mile) it was sighted to our extreme left, we having almost passed by it. As we splashed along into the town, or rather under it, any number of slender blueish necks thrust out as many long, yellow bills, with an inquiring note of alarm, which was presently increased, as my friend raised his gun and brought sprawling to the ground, a "bunch of blue feathers a pair of long legs," and one of the afore mentioned long necks and yellow bills.

I was armed with a pair of climbers and a basket. The walk to the town was so excessively fatiguing that but two houses (heaps of brush about the size of a bushell basket) were inspected. In each were found four beautiful blue eggs. The hundreds of similar homes immediately surrounding, also bore evidence of eggs.

One great blue heron, (for our village was a heronry or, as natives styled it, "crane town.") is not very heavy, but six more dangling on one's back, with footing extremely uncertain, made it no child's play to quit the town. Reaching the base of the bluff two mortals dropped to the ground completely exhausted. After a few minutes rest, rubber boots were pulled off, water poured out, pants and stockings wrung dry and shouldering the birds we started for the boat, and home.

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VALPARAISO, IND., MAY, 1887.

ERRATA.

Page 137, No. 1, 1st line; for *Codilymbus* read *Podilymbus*.

Page 140, No. 76, 3rd line; for *parasite* read *parasitic*.

The June HOOSIER NATURALIST will not appear until the latter part of that month.

The Indiana Academy of science meets May 19. and 20, at "Shades of Death." in Parke County, Indiana.

The new edition of Coues' Key to North American Birds is now ready. We will give an extended notice of same in next issue. The price is but \$7.50.

Orders sent to us will receive prompt attention.

At this season of the year an egg check list is invaluable to every one collecting eggs. Oliver Davie's Key to the eggs and nests of North American birds meets every requirement for field or home study and identification. It has about 200 pages and besides is embellished with seven magnificent full page engravings execu-

ted by that venerable and renowned artist and naturalist, Theodore Jasper, A. M., M. D. The price for so valuable a work, to the naturalist and collector, is, really, very cheap, yet by purchasing in large quantities (all there are remaining) we are enabled to offer the book prepaid for \$1.00 and will also mail the HOOSIER NATURALIST for one year, to every purchaser through us. A more liberal offer could not be made.

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THE Santa Barbara, Cal., Society of Natural History has favored us with a Report of its proceedings, from its organization, in 1876, to 1887. It presents the following table of contents:

Notes on Climate, Dr. L. N. Dimmick; Infusorial Earth of Santa Barbara, Cal., Dr. W. W. Finch; Notes on Excavations made in Indian Burial Places in Carpinteria, H. C. Ford; Flora near Santa Barbara, Cal., Mrs. R. T. Bingham; The Water Birds of San Miguel Island, Clark P. Streater; Prehistorical Man in California, Dr. Lorenzo G. Gates.

We have also received the "Birds of Amherst and vicinity, including nearly the whole of Hampshire county, Mass.," by Hubert L. Clark, with an introduction by Prof. C. H. Fernald, Ph. D.

The Key is a pleasant feature of the work, and is somewhat simpler and easier for a beginner than others we have seen. It however, identifies only the one hundred and seventy-seven birds described in the text. The work is a valuable addition to ornithological literature. We were, nevertheless, surprised that so few species are recorded for the county, particularly the water birds.

The list of Monroe county, Ind., however, published in this issue, enumerates but one more species.

Of the one hundred and seventy-seven species occurring at Amherst and vicinity, one hundred and forty-three species are found in the Monroe county list. Thirty-four species appearing in Hampshire County not found in Monroe Co., and thirty-four species being found in Monroe Co. and not in Hampshire.



AND

TAXIDERMXY.

MR. EDITOR:—Can you tell me, through the HOOSIER NATURALIST, the best way to soften a skin, (such as wild cat or fox,) to be used for rug or similar purpose.

Enclosed find subscription price of H. N., which I like very much and think is steadily improving. Yours truly,

J. VANDENBURGH.

KENESAW, NEB., MAY 2, 1887.

EDITOR HOOSIER NATURALIST:—I notice in the Feb. No. of the HOOSIER NATURALIST an article in reference to sore fingers caused by getting arsenical soap under the nails and asking for a cure for same.

If any one troubled in that way will procure a little zinc salve and apply at once it will not fail to cure it.

P. E. H.

EDITOR HOOSIER NATURALIST:—"C. H. H.," of Louisville, Ky., asks in Feb. H. N. for antidote for arsenical poisoning, caused by the poison getting under the finger nails. I know of no *antidote* save *prevention*. I wash my hands often while using the arsenic, and in addition paint around and under the nails with collodion, which, if of good quality, will form a strong artificial skin. A camel's hair brush is used to apply the collodion. The brush should be kept inside the bottle, the quill end being inserted in the rubber stopper. Let the collodion run well under the nails, give all "hang-nails," cuts and scratches a coat of it, and let it get dry before going to work. Another

protective solution, less liable to crack than collodion, is the caoutchouc, or India rubber solution, which can be had of druggists. Water has no effect on either of the above. Sometimes I use shellac varnish as a protective paint, as it dries quick. Putty is good, also the clay that taxidermists use, while melted tallow might answer. Medical students, in dissecting, fill their finger nails with bar soap. This has the merit of washing out easy. But for security give me the three fluid protectors, for they stick and one feels safe.

Mr. Jas. M. Southwick, of Providence, R. I., advocates a preservative composed of one-third alum powder to two-thirds arsenic by weight. Alum being an astringent, acts to close the pores of the skin, thus lessening the chances of poisoning, and it also has a beneficial effect on bird skins with loose feathers.

G. G. DICKEY, Acworth, N. H.

LIMA, OHIO, APRIL 25, 1887.

EDITOR HOOSIER NATURALIST:—On April 21, a bird which is rarely found in this section of the country, was brought to me to be mounted. The head is black glossed with green and purple, and the cheeks and back of the neck are black without the green gloss; the back is black variegated with short white streaks. It has a white collar with black stripes and nine white stripes under the throat. The beak is black and pointed, and the breast is white. Length 2ft. 8in.; extent, is 4ft. 4in. It has web feet, and like the grebes, the feet and legs are set pretty well back. It was shot about five miles east of this place on the Ottawa river. Will you please tell me what kind of a bird it is? I think it is a great northern diver.

F. M. L.

[The largest of the three loons in our possession measures but 26 in. in length and he is, we think, unusually large.—Ed.]

Replying to "C. O.," the bird sent is a song sparrow.

EDITOR H. N.;

We have had a severe winter, a late spring and in consequence the bird arrivals are later than common.

For March, saw two crows on the 12, becoming common 15, to 18; 3 bluebirds 18, becoming common 21, to 25; a golden-winged woodpecker 29. During April, robins appeared on the 4, becoming common 6, to 8. On the 8, saw two red-tailed hawks. Shot one, a male. Saw a chipping sparrow on the 9, they becoming common on the 10, and 11. A flock of pewees appeared on the 10, becoming common on the 11, and 12; one song sparrow on the 13, common on the 16, to 18; one chimney swift on the 15. Heard a whip-poor-will on the 17, and on the same date saw a catbird. On the 20, saw one purple grackle, two chowinks, five cowbirds. On the 21, saw a red-headed woodpecker, and two green herons. This morning, (15,) saw two scarlet tannagers, and one barn swallow.

NIX, TUNBRIDGE, VT.

A Few California Birds.

BY THEO. E. BARLOW.

Since I have never seen much in your paper concerning our birds, I send a few brief notes hoping they may be of some interest to eastern readers.

No. 7a. Western Robin. This is one of our winter visitors, coming in large flocks once in three years, arriving here about Nov. and leaving Mar. 1. Why they do not come every year I can not tell. They have been known to breed in this vicinity. Their eggs are a trifle larger and darker than the eastern species.

No. 23. California Bluebird. This bird like several others we have was unknown here a few years ago. Last year I obtained a set of four eggs from an old apple tree. They were similar to the eggs of the eastern species.

No. 63a. Western House Wren. This little bird was also not seen here until April '85. A friend of mine found a nest

containing young ones, April 29, 1887. The nest was very bulky. It was in a deserted house.

No. 149a. White Rumped Shrike. This bold bird is an old settler. He can usually be seen sitting on the highest point of a fence or telegraph pole surveying the ground beneath for crickets, bugs, mice and young birds if he can get them. In the winter of 1886 I saw a butcher bird kill a towhee (240b) by crushing the back of the skull. In 1886 I took four sets from one pair of these birds, 3 of 6 eggs and one of 5 eggs, between Apr. 9, and May 29. The eggs are usually light gray with spots of light brown and purplish grey. The ground color is often light green; this variation often occurs in eggs of the same set. The nest is made very warm and bulky and always containing a strong smelling white weed which is a distinguishing characteristic.

An Unsuccessful "Hunt after 'Lunas.'"

It occurred early on a June morning in a hickory grove on the road between Glens Falls and Sandy Hill, and was conducted by two members of Chapter 711; its object was the capture of any entomological specimens, but particularly desired and searched for was *Attacus luna*, the most beautiful of all American moths. The chapter's cabinet was without one of these desirable individuals, and that was the reason why two of its members had ventured forth at the unseemly hour of four A. M. and provided with net, collecting box, etc., had started for the supposed home of *Attacus luna*. To any one who is not in the habit of going out into the woods and fields before the sun rises, the general appearance of things is rather strange; we did not wait to consider that fact very long, however, and only stopped to capture a sleeping dragon-fly, who was, no doubt, much surprised to wake up and find himself inside a cyanidejar, just going to sleep again.

As soon as we entered the grove we

felt that we had a splendid opportunity for studying one phase of insect life, and although we did not appreciate our advantages the mosquitoes did theirs and improved them. The caterpillar of the luna moth usually feeds on the leaves of the hickory, forming his cocoon upon or around one of them, which falls from the tree with the other leaves in the autumn. The moth emerges from the cocoon in June, and is often to be found on the tree trunks early in the morning before the sun has warmed his wings so he can fly away. We made a thorough investigation of the grove but found nothing at all relating to the object of our search, excepting a chrysalis "shell" from which a luna moth might have come at some period in the distant past.

Although disappointed in this respect, we found many objects which would provide us with material for investigation. On a number of trees we found the curious "leaf-roller" larva which beginning at the apex or the side of a leaf rolls it into a tube, fastening it with a gummy substance like the silk of caterpillars. The tube thus formed furnishes the occupant with food, and, also, protects him from the heat of the sun. We also found numerous gall-like growths, each of which contained a parent aphid and a large family of young.

As our time was limited we started for home, arriving at the main road just in time to see the early horse car coming up. A hasty but thorough investigation showed a total absence of available capital and so we decided to walk. A little way up the road we stopped to look at a pool of stagnant water and found what we considered a curious water insect. It was a little larger than a silver quarter, of an oval shape, and it swam and dived with ease. But its most peculiar feature was that its back was covered with little cells most of which contained a single egg, a few however, being empty. We took it home and placed it in a shallow tank of water, intending to make a clos-

er examination of it, but the next day the insect had disappeared. Farther up the road we stopped to look at a mining project which was being carried on at a sand bank near the road; after viewing the regularity and depth of the tunnels, and proving the inconsistency of the material out of which they were being excavated by attempting to climb up the bank, we came to the conclusion that swallows, as mining engineers, are very successful. Arriving at the Academy about 7 o'clock, we left our numerous specimens for the edification of the Chapter, agreed upon the fact that we had employed about three hours to the advantage of our minds and bodies and that the trip was well worth repeating. — *The Owl*. A quarterly Magazine published at 20c. per annum and sent as a premium with the HOOSIER NATURALIST.

Nesting Under Difficulties.

On May 17, 1886, I discovered a pair of blue-gray gnatcatchers building a nest on a horizontal limb of an oak tree, about thirty feet up. On May 28, I again visited the tree and found the birds had taken their departure, but as the nest appeared to be a large one, I ascended the tree to obtain it, and on examining it I found that a cowbird had deposited an egg before being occupied by the owners. They had then put in more lining, covering it entirely over, and had built up the sides of the nest about three-fourths of an inch higher, but had finally concluded to abandon it, and were found building another nest a few rods from there. This goes to show that they do not willingly submit to the intrusion of the cowbird. — Samuel Spicer in *Ornithologist and Oologist*.

Be sure and read about Davie's Key to the eggs and nests of North American birds, spoken of elsewhere.

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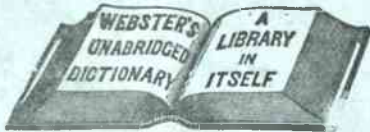
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THE HOOSIER NATURALIST.

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A Lesson in Electricity.

BY ADAM STWIN.

"Combs can't blow, can they?"
Could you guess what Johnny ment by such a queer backhanded question? I couldn't nor his sister either. I was quite sure, however, that he meant something sensible if one could only get at it; but Mary was doubtful.

"Blow what?" she asked, not so pleasantly as she might.

"Why, blow air," said Johnny, "to make wind."

"Of course not, you silly child; what makes you ask such a question as that?"

Mary thinks Johnny is a pretty bright little fellow in general, but on particular points she is always ready to call him a dunce without stopping first to find out what he really means to say. The trouble is she knows so little herself that she thinks she knows everything, at least everything worth knowing; and Johnny is all the time puzzling her with questions that she has no answer ready for.

"What have you seen to make you ask that question?" I inquired.

"I didn't see anything," said Johnny; "I just felt it—like some one breathing softly on my face and hand when I held my comb near."

"Nonsense," said Mary; "you just imagined it."

"No I didn't," Johnny insisted; "I felt it really this morning when I was combing my hair."

"Oh," said I, suspecting the cause of his difficulty; "what kind of a comb was

it?"

"A black comb," said Johnny.

"Horn or rubber?" I asked.

"Its a rubber comb," said Mary.

"How did your hair behave when you were combing it?"

"Mean as anything," Johnny replied.

"It stuck up like Mary's when its frizzled, and wouldn't stay anywhere."

Part of that was for Mary's benefit Johnny likes to tease her.

"Did you think the comb made it do that by blowing it?" I asked.

"Not at first," said Johnny; "the comb seemed to crackle, and I put it to my ear to listen; then I felt the wind on my cheek."

"Suppose you bring the comb here," said I, "and show us what it did."

Johnny ran off for the comb, but came back quite crestfallen.

"It wont do it now," he said.

"As much as ever!" cried Mary triumphantly.

"But it did this morning, truly," he said, rather humbly.

"Pshaw" said Mary, "you imagined it."

Like many another discoverer, Johnny had to learn what it is to be discredited and ridiculed for knowing too much. Because Mary had never noticed what he described, she was as ready as older people to cry "nonsense," "impossible," and all that sort of thing, without stopping to consider whether he might not be in the right after all.

"You had better try it again some other day," I said to Johnny. "Try differ-

ent combs. Try in the dark, too."

"What for?" Johnny asked.

"You might see something," I said.

"In the dark?"

"Yes in the dark."

Johnny wondered how that could be; and he wondered still more when I suggested that it might be a good plan to try the comb also on Humpty Dumpty—that's his shaggy dog.

Two or three mornings after Johnny came pounding at my door before breakfast; when I let him in he cried; "It blows now, sure!"

"What blows?"

"Why! the comb."

I took the comb from his hand and putting it to my cheek said, "I don't feel any wind from it."

"That isn't the way," he said, reaching out for the comb. "You must do this first," and he ran the comb rapidly through his hair a few times, then held it to his cheek, saying, "I can feel it, plainly."

"See if it will blow these," I said, stripping some bits of down from a feather and laying them upon the table.

Johnny repeated the combing, then held the comb near the down, expecting to see the light stuff blown from the table. To his great surprise it was not blown away at all, but on the contrary it sprang suddenly toward the comb, then dropped off as suddenly.

"That's queer," said Johnny.

I excited the comb again and held it near the back of my hand, calling Johnny's attention to the fact that all the fine hairs stood up when the comb came near them.

"When you hold the comb near your cheek," I said, "the downy hairs stand up like that, and the feeling is just like that of a breath of air."

"Then it isn't wind that comes from the comb?"

"No, it is not wind."

"Maybe the comb is a magnet," suggested Johnny, seeing its attraction for

light hairs, dust and the like, as I held it over them. I took a small magnet from my table-drawer and held it near the feathers and hair. It did not stir them no matter how much I rubbed it. It picked up a needle, though, very quickly. Then I rubbed the comb, and though it attracted the feathers, it had no effect on the needle.

"Is that like a magnet?" I asked.

"No," said Johnny.

"When the needle springs to the magnet it sticks there; but when the hair or down springs to the comb it flies away again, instantly."

"It is very queer," said Johnny.

"Try this horn comb," said I.

Johnny tried it; but comb his hair as much as he might the horn would not draw anything. Then he tried a shell comb, and an ivory comb, neither of them acting as the rubber comb did.

"I don't understand it at all," said Johnny.

"Nobody does fully," said I; "but if you keep trying you may learn a good deal about it in time."

Then we went to breakfast. It was several days before the subject was brought up again. "I've been watching a long time," said Johnny that evening.

"I began to think it would never happen again, but it's first rate to-day."

"Have you found out anything new?" I asked.

"Not much," said Johnny. "I tried Humpty and the comb crackled like everything. What makes it do that?"

"I think we'll have to study that to-night," I replied. "Where's Humpty?"

"In the kitchen. Shall I call him?"

"If you please; bring pussy, too."

Johnny was soon back with Humpty and Nebuchadnezzar—that's pussy. We call him Neb, for short. Then we went into the library and put out the lights.

"How can we see what the comb does?" Johnny asked.

"Some things can be seen in the dark," I replied. Then I drew the comb brisk-

ly through Johnny's hair, making it snap and sparkle beautifully. "See," I said, bringing the teeth of the comb opposite my knuckle, "this is what makes the snapping."

"How pretty," Johnny cried, as the tiny sparks flew from the comb to my knuckle. "What is it?"

"Lightening," said I.

"Lightening! In my hair?"

"Certainly," I said. Let me comb out some more."

John was almost afraid of himself when I brought another lot of sparks from his head.

"Polks had better look out when I'm around," said the little fellow pompously. "Mary says I make more noise than a thunder-storm sometimes; I guess it's the lightening in me. Somebody'll get hit yet."

"Not very severely, let us hope," said I laughing. "Suppose we try Humpty, Maybe he's a lightening-bug too."

Sure enough, when we passed the comb through his shaggy coat the sparks flew finely. So they did when we rubbed him with the hand.

"Let's try Neb," said Johnny; "here he is under the sofa; I can see his eyes."

But Neb had no notion of being rubbed the wrong way. As soon as the sparks began to show, his patience gave out, and he went off with a rush.

"I guess Neb's lightening goes to his eyes and his claws," said Johnny.

After that we tried the sheepskin rug. Mary's muff and several other things of the sort, getting sparks from all of them.

"Everything seems to have lightening in it," said Johnny.

"Appaently," said I, "but you can't make it show in everything alike; any way, not by rubbing. Try the chair back the table, the sofa and such things. Generally when two things are rubbed together the lightening—or *electricity*, as it is commonly called—escapes quickly. When it can't do that it accumulates—as it does in the rubber comb—and goes off

with a snap when it gets a chance. When a cloud contains more electricity than it can hold some of it jumps to other clouds or to the earth, making a flash of lightening. The thunder is its prodigious snap and the echoes of it. Are your slippers quite dry?"

"I thind so," said Johnny, wondering what that had to do with lightening.

"I think the furnace has been on long enough to make the carpet quite dry, too," I said, turning just a glimmer of light on. "If it is you can make a little thunder-storm of yourself easily."

"How?" Johnny asked eagerly.

"Just skip around the room a few times without taking your feet from the carpet."

Johnny spun round like a water-beetle for a minute or two; then I stopped him and told him to reach out his fore-finger.

When he did so I reached my fore-finger to his and, as the points came together *snap!* went a spark between them, whereat Johnny cried "Oh!" and put his finger to his mouth.

"Did it burn you?"

"No," said Johnny, "but it scared me."

He was not so badly scared, however, but he wanted to try it again and again, while I turned up the light and went on with my reading. By and by Humpty came out from under the sofa to see what was going on, and Johnny sent a spark into his nose. It didn't hurt him any, though it surprised him not a little.

"Wouldn't it be fun," said Johnny, "to give Mary a shock?"

"Charge yourself again," I said, then come to me with your hands down."

Johnny did as I bade him, whereupon I stooped and kissed him on the mouth. It was his turn to be surprised that time.

Just then Mary came to tell the young lightening catcher that it was time to go to bed.

"All right," said the little rogue, cheerily, skipping about the room. "Kiss me good-night, Mary, but don't touch me with your hands," he said, at last, de-

murely holding up his mischievous mouth.

Mary gave the kiss, and got in return what she didn't expect.

"You little rascal," she cried, "you've got a pin in your mouth."

"No I haven't," he said.

"It's a piece of rubber, then."

"No, it isn't rubber."

"What was it?"

"Lightening," said Jonny. "See!" and he skipped a few times across the floor, then gave her a spark from his finger. Then he ran off to bed, laughing at Mary's bewilderment.—*Christian Union*.

The Drift.

By E. L. R.

Geology tells us that in former ages a mild climate prevailed over the whole of the American continent, even to the Arctic Sea: that plants and animals then existed far to the north that could only have lived in a warm or tropical climate. A great change came suddenly upon them and their remains are now found deeply imbedded in the earth. The land that had smiled and bloomed beneath a tropical heat, was smitten by winter's cold and changed to the silence of desolation.

The warmth of this ancient past

Was stricken by an icy blast

All living things, both small and great

Together met a frozen fate.

The glaciers then began to form,

Through centuries of snow and storm,

And moving slowly on their way

Changed mighty rocks to sand and clay.

Then came what is known as the Glacial Period which was to change the whole surface of the land over which it reached. Many theories have been advanced relating to the cause of this change from a tropical to an arctic climate but it has not yet been very positively explained. The glacier has left its marks plainly graven upon the surface of the rocks, over which it carried the clay, sand, gravel, etc., that we call "the drift."

Agassiz has said, "The glacier was God's great plow" with which the hard rocks were ground to a powder and mixed together, thus preparing a soil fit for the agricultural use of man.

No better field for the study of the American drift can be found than Indiana. The greater part of her rocks, over three-fourths, are covered by the clay, sand, gravel and boulders, to the depth of a few inches in the southern part of the state, to over 200 feet in the northern part. In the northern part of the state the depth, as shown by various wells which have been sunk into the underlying rock, varies from 92 to 212 feet.

An Addition to the List of Birds of Monroe County, Indiana.

In looking over the list of Monroe County, Indiana, Birds, as published in the May HOOSIER NATURALIST, I notice with regret that I failed to mention the evening grosbeak (*Hesperiphona vespertina*) as a bird of that county. On Saturday, January 22, 1887, a fine male was seen and shot by Mr. Chas. H. Ballman in the University Campus. Up to date this is the only specimen of the species ever seen in the county since the appearance of my note on this species in the *American Naturalist* for March, 1887. I have been informed by Prof. Charles R. Barnes, of Purdue University, that there is in the museum of that institution "a fine male *Hesperiphona vespertina* shot here [near LaFayette, Ind.] in November, 1878." This, then, appears to be the first for the state of which we have any record. For the other records see *American Naturalist* for March, 1887.

Prof. Barnes also reports two snowy owls as having been shot last December on the Wea Prairie, 6 miles south west of LaFayette.

B. W. Evermann.

Terre Haute, Ind.

A Voice from Florida.

EDITOR HOOSIER NATURALIST:

The June number of your valuable paper has just been received. Looking it over I miss "Correspondence and Taxidormy." Why was it omitted? Do the young Naturalists fail to furnish you with copy? I fear this is so. Instead of the interest in "Correspondence" dying out I hoped it would constantly increase. Why do not all the young Naturalists write about their experiences while collecting and about the specimens they have taken during the summer? I shall write about mine and hope to see others follow.

Bonifacio is a little town situated on Boca Ceiga Bay, at the southern extremity of Puellos Peninsula, which separates Tampa Bay from the Gulf of Mexico. The peninsula is composed of high and low land, lakes, marshes, creeks, hammocks, etc., etc., while along the coast runs a narrow chain of keys which abound with sea birds. So I have a pretty good place to hunt specimens. Some time ago I found a little pond full of young alligators. A few days afterwards a friend and myself went down to catch some of them. Fastening three hooks together we tied them on a short rod and when the little alligators rose to the surface we slipped the hooks under their bodies and suddenly jerking, the poor little alligator was swinging in the air and was soon placed in a box provided for the purpose. We caught 4 and went home. June 20, my brother and I went on a trip down the coast in his sharp-rigged boat, "Anna," to hunt bird's eggs and sea curiosities. Saw a large colony of roseate spoonbills on a little key. Shot at one but did not get it. June 21. Stopped on a small island called Passage key. Found several sets of laughing gull eggs and some fine coral. Saw numbers of gulls, terns, shearwaters and willets; also a few snipe and in some low trees we saw about 200 Louisiana herons' nests and a few

young herons. Stopped for the night at Long Boat Inlet. June 22. Ran all day. Anchored at night on a large oyster reef and had fine oysters for supper. Saw a large colony of great white herons in a little key not far off. June 24. Ran down to turtle key and anchored. Walking along the beach I found 4 turtles' crawls and got 110 eggs from one, 140 from another, 140 in the third, and 100 in the last. Also found a fine lot of skates' eggs, sea urchins, coquenee rock, pipe coral, and a few fine shells. At night we went down the beach to hunt turtles. We carried a lantern and soon spied a turtle depositing its eggs. We turn it over on its back and left until the next morning. On our way back we found another turtle and turned him also. We got 123 eggs from one and 96 from the other. June 25. Loaded turtles on boat and started home. Reached Tampa bay at night, 20 miles from Turtle key. June 26. Stopped on Passage key and got 7 royal terns' eggs and 2 laughing gull's eggs; also some coral. Met Joseph H. Batty, of New York, hunting birds. Arrived home at 1 P. M. On the 4th of last June I went to bird rookery, which is about $1\frac{1}{2}$ miles from Bonifacio and obtained 22 sets of brown pelican eggs and 2 sets of Florida cormorants' and 12 single eggs. June 14. I went again and got 14 sets and 7 single eggs of the Louisiana heron. While walking in the woods I was fortunate enough to find a set of night hawks. Date of collecting, May 20, '87. May 29 I was lucky in finding a set of chuck wills widow eggs, which are worth \$3 per set. The number of eggs I have taken altogether are as follows:

Brown pelican; 12 sets of 3, 1 set of 2 and 7 single eggs. Florida cormorants; 3 sets of 2, and 12 single eggs. Louisiana heron; 8 sets of 2, 4 sets of 3, and 7 single eggs. Royal tern, 7 single eggs. Laughing gull; 3 sets of 2, and 15 single eggs. Night hawk; 1 set of two and 2 single eggs. Chuck wills widow, 1 set of 2. I also collected 2 sets of the great

blue heron's eggs. A good season's work I think. Have also found some fine shells, sea-beans, starfish, and other sea curiosities. I am just starting a collection of insects and am also practicing taxidermy and have several specimens ruined by croton bugs. Does any one know a remedy for them? Considering that I have had to work most of the summer and that all the specimens named above are first class, I think I have done very well. Do you not think so? Let us hear from some one else. Ever a friend of the HOOSIER NATURALIST and a lover of nature, I remain, Yours.

CHAS. S. MCPHERSON.

BONIFICO, Fla., July 25, 1887.

Cuckoo and Snake.

On the evening of the fourth of this month, while passing along the road, my attention was attracted by the sound of a bird vigorously fluttering in the midst of a dense tangle of wild grape vines which ran over the tops of the undergrowth near by. On pushing my way into the thicket I found a yellow-billed cuckoo in the clutches of a large black snake. The bird had a nest in the vine, in the top of a dogwood, where she had evidently been sitting when seized by the snake. The reptile was lying partly on the nest and partly on the grape-vine with its body coiled tightly around that of the bird, while every now and then it gave the helpless victim a savage snap with its jaws. To get a better view of the snake's movements I shinned up a sapling that stood near by and seated myself in a crotch on a level with him. When the bird had entirely ceased fluttering the snake seized its head in his jaws and began slowly. When he had gotten outside of about half of the bird, I spoiled his meal by breaking his back with a limb cut from the sapling. The cuckoo's nest contained two eggs and one young bird, none of which

had been injured. The snake measured four feet five inches in length. These snakes in climbing trees do not wind around the trunk, as many seem to suppose, but always go zig zagging up one side holding on the bark with their scales, taking advantage of any knot or projection by running their bodies over it.

JOHN B. LEWIS.

A Ruby Throat's Nest.

On the 14th of last July it was the writer's good fortune to discover a nest of the ruby throated humming bird. It was situated on top of a white oak limb about 30 feet from the ground and seven or eight from the trunk of the tree. The limb is one inch in diameter where the nest rests on it and has a dead twig $\frac{1}{4}$ inch in diameter projecting from the side under the nest. The nest is composed of plant down, of a dirty white color and very soft. This delicate frame work is covered on the outside by fine bits of gray lichens exactly corresponding in color to those on the limb on which it rests. This covering is held in place by a net work of spider web so thickly and evenly wound about and over the pieces as to make it impossible to get the point of a pencil between them. The nest is 1 5-8 inches high and $1\frac{1}{4}$ inches in diameter at the top, and is circular. The nest contained 2 eggs of a delicate clouded white color, almost transparent. The bird never alighted on the edge of the nest, to my knowledge, always hovering over it a moment and then suddenly dropping into it, where all that could be seen of her from below was the end of her long bill projecting over the side.

Eubanks, Ky., June 8, 1885.

All parties receiving this number of THE HOOSIER NATURALIST are requested to read what we have to say on page 169. These offers are so very liberal we shall expect you to accept one of them at once.

The Wanton Destruction of the Florida Heronries.

Cannot general legislation, cannot state legislation, or cannot somebody raise a hand to stay the terrible, the shameless extermination of the herons at their breeding grounds in the south-western parts of the State of Florida?

As I pen these lines this murderous work is being actively carried on, and apparently in the most lawless and reckless manner possible,—a disgrace to the entire country,—for one of America's grandest and most interesting natural features, her heronries, are simply, and without a check of any kind, being ruthlessly wiped out of existence. Prompted by an insatiable greed for gain, the 'plume-traders' of the markets are upon their grounds in numbers, and hundreds of these birds are now daily falling to their unceasing fire, simply that they may have their backs robbed of a few feathers to gratify a passing fashion. *The Auk* is now pub-

At an admirable series of articles on subject from the able pen of Mr. W. Scott, at present on a scientific expedition in Florida, and I have just read contribution to the July number of journal. Mr. Scott has very recently camped at a number of these heronries, and I quote a few of his words in it to show what work is going on.

At Matlacha Pass, near Charlotte Harbor, Pine Island is a heronry, and one Johnson was at work. "A few were to be seen from time to time to the island, and presently I took small boat, and went ashore to reconnoiter. This had evidently been only a time before a large rookery. The were full of nests, some of which contained eggs, and hundreds of eggs strewn the ground everywhere. Fish-crows and both kinds of herons were present in great numbers, were rapidly destroying the remaining eggs. I found a huge pile of dead, decayed birds, lying on the ground,

which had apparently been killed but a day or two. All of them had the 'plumes' taken, with a patch of skin from the back, and some had the wings cut off, otherwise they were uninjured. I counted over two hundred birds treated in this way." In some places Mr. Scott found hundreds of the young herons just starving in their nests; in others, the gunners beneath the trees shooting down the magnificent birds in hundreds, stripping their backs, and leaving their carcasses to rot upon the ground. Instances were noted without number, where, during the breeding season, the poor affrighted survivors were driven to strange islands, dropping their egg in quantities from the trees where they fearfully roosted for the night. A few more years, one or two at the most, and this disgraceful murder will cease, for the simple reason that there will be no more victims for the murderers to prey upon,—and in the name of nature, and in the name of the shadows of the sweet old romances that have come down to us of the heronries of history, are these timid, and most engaging of all our larger water-fowl, our own American herons, to be destroyed in this manner!

Twenty years ago southern Florida was the sight of the grandest heronries in all the world, and to-day this State is making enviable progress, and many cultured people are flocking to her for a permanent home; is she to stand idly by and watch what will surely be one of her greatest natural attractions stamped out in a few months under her very eyes,—a work, that, when fully known, as it will surely be, will pass down as one of the blackest pages in her history? A quarter of a century ago the writer was at Charlotte Harbor himself, and well do I remember my unbounded enthusiasm as my eyes first feasted upon the sight of a Floridian heronry; many, many species, represented by thousands upon thousands of individuals, were ranged along the beaches, or covered the cypress tops,

where their nests were in hundreds. Never shall I forget their lovely uniforms as they glistened in the soft atmosphere of that sub-tropical land; some were snowy white, others a charming blue or warm chestnut, while, more beautiful than all, the wondrous rosy tints of the spoonbills fairly shone in the bright sunlight.

Really I am sad as I see, only too vividly in my mind, the disgusting slaughter that is now being perpetrated in their very midst. Entire rookeries have been exterminated, and others reduced to a few, very few, pairs of birds, now so wild and suspicious that it requires the skill of the rifleman to capture them.—
R. W. SHUFELDT in *Science*.

Dates of Arrivals of Birds in DeKalb Co., North eastern Indiana.

The following notes are accurate, as the observer has spent much time and taken great pains in preparing them. The first date is the day when the bird was first noticed; the second date, when next observed:

Common Crow, February 5, 9, 14, 16.

(A few crows probably remain all winter)

Blue bird, Feb. 16, 25.

Robin, Feb. 14, 15, 16.

Song Sparrow, Feb. 16, Meh. 1, 4.

Meadow Lark, Meh. 1, 3.

Red and buff shouldered Blackbird, Feb. 26, Meh. 2.

Bronzed Grackles, Meh. 4, 5.

Killdeer, Meh. 7, 8.

Chipping Sparrow, Meh. 7, 11.

Chewink, Meh. 15, 17.

Cardinal Grosbeak, Meh. 12, 19.

Pewee, Meh. 11, 17.

Mourning dove, Meh. 8, 9.

Wild Geese (flocks), Meh. 7.

Cedar Waxwing, Meh. 19.

American Woodcock, Meh. 22.

Great Blue Heron, Meh. 23, Apr. 22.

Wood Pewee, Meh. 25, Apr. 4.

Belted King-fisher, Apr. 3.

Brown Thrasher, Apr. 14, 15.

Tree Swallow, Apr. 19, 20.

Barn Swallow, Apr. 23, 24.

Cliff Swallow, Apr. 30.

House Wren, Apr. 30, May 1.

Baltimore Oriole, Apr. 30, May 1.

Cow Bird, Apr. 14, 30.

Catbird, Apr. 30, May 2.

Red-headed Woodpecker, May 1, 2.

Chimney Swift, May 2, 3.

King Bird, May 3, 5.

Rose-breasted Grosbeak, May 7.

Scarlet Tanager, May 7.

Sparrow Hawk, May 7.

Bobolink, May, 3, 7.

Orchard Oriole, May 4, 7.

Indigo Bunting, May 8.

American Redstart, May 8.

Bank Swallow, May 8.

Ruby-throated Humming bird, May 9.

Night-hawk, May 15, 16.

Yellow-billed Cuckoo, May 14, 15.

Spotted Sandpiper, Apr. 30.

JOHN O. SNYDER,
Waterloo, Ind.

Niagara Excursion.

Bell's annual excursion train will leave Valparaiso, Ind., August 15. at 10 A. for the Niagara Falls, on N. Y. C. & L. R. R. The round trip will be \$7.50. Good refreshments will be served at reasonable prices, on board the train. It will not, therefore, be necessary to carry lunch. We should be pleased to meet any of our H. N. readers who avail themselves of this cheap rate to visit the falls.

We shall be pleased to give all information necessary. Address with a stamp to
R. B. TROUSLOT, Valparaiso, Ind.

A Strange Place for a Bird's Nest

The men working at gas well No. 2 at this place, found a blue bird's nest with two eggs in it, in the pump they had been using for clearing out the well. The pump had not been used for a week or on account of the loss of the drill.

W. F. WEST, Greensburg, Ind.

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VALPARAISO, IND., JULY, 1887.

Editor's Card.

With this issue THE HOOSIER NATURALIST completes its second volume. The long voyage just terminated, has been to us, in many respects, a very enjoyable one indeed.

We have formed the acquaintance of scores of young people naturalistically inclined; have been generously assisted in a literary way by many able naturalists; financially have lost nothing.

We are equally grateful to those who helped to make THE HOOSIER NATURALIST readable and to all who, considering it so, sent in their subscription.

THE HOOSIER NATURALIST is not discontinued from lack of interest on our part—far from it. Young men, every where, are seeking to better themselves by going West. Such have been our desires for a long time, so, when C. R. Orcutt, of San Diego, Cal., publisher of the *West American Scientist*, proposed, some months ago, to purchase THE HOOSIER NATURALIST, we considered his communication favorably and consented to transfer our entire right and good will of

the aforesaid magazine to him, at the close of Vol. II.

We have always desired to give value received. With this end in view unexpired subscriptions will be filled by a larger, more ably conducted and consequently better magazine — *The West American Scientist*, the regular subscription price of which is one dollar per annum.

To induce all the old subscribers of THE HOOSIER NATURALIST to renew with the W. A. S. at once, by special arrangement, we are enabled to offer this excellent natural history magazine to them at the extremely low figure of fifty cents per year. This offer, to be good, must positively be accepted before Sept. 1.

In the *West American Scientist* a series of descriptive articles on Southern California, are now running. The illustrations are full page and veritable gems of the art photographic.

Its corps of contributors are numbered among the eminent naturalists of America. To these will be added many of those who so generously assisted us. W. R. Lighton will continue his Geological Department, which we consider a valuable and interesting feature. We will also undertake an Ornithological and Oological Department and trust that the subscribers of both papers will assist us in making it a success. We still have about thirty copies of Mr. Davis' New Egg Check List of North American Birds, and to hasten their sale will mail free the *West American Scientist* for one year to all purchasers before Sept. 1. Hence 30 people can get two dollars for one. Should any remit after the books are all sold the money will be promptly returned. Notwithstanding the sale of our H. N., the firm of R. B. Trouslet & Co. will continue to do business at its old stand, No. 39, Col. Ave., and will always be happy to accommodate all customers and they beg to assure you that whatever orders you may entrust to them will receive their prompt and careful attention.

Very truly, R. B. Trouslet.

PROFESSORS B. W. EVERMAN and O. P. Jenkins are collecting at Guaymas, Mexico. They expect to return in August. If the weather is as warm proportionately with them, as we found it at St. Louis, a few days ago, they are to be pitted.

PARASITIC Plants, which appeared in the June issue of this magazine was written by G. E. Briggs, of Peekskill, N. Y. Through an oversight on the part of the publishers, no credit was given.

We are recently informed that an Academy of Science has been organized at Leavenworth, Kansas, with W. R. Lighton as secretary. Leavenworth takes unusual interest in scientific matters and it is with pleasure we chronicle this step in the right direction. The indications are, that our Indiana Academy will have a healthy rival.

Mongolian Pheasants.

I take a great interest in ornithology and could send you some interesting accounts of the birds of this state. We have ruffed grouse and plumed quail in the coast mountains. Mongolian pheasants were introduced in this state about seven years ago, from China, by our consul, O. N. Denny. They are becoming numerous in parts of the Willamette Valley and seem to flourish here as well as they do in their native *habitat*. Of severe winters they sometimes come into our barn yards and, with their long tails and bright plumage, look quite handsome.

Yours truly,

H. C. Perkins.

LLEWELLYN, Lane Co., Or., July 10, '87.

A Gangry White Pelican.

I have just received from Huron, Dakota, a very large live White Pelican. He has a fine crest and did have a large "horn" on his upper mandible, but it was broken

off on the trip here.

He shows no fear, and his eyes have a mild and pleasant expression (they are bluish gray in color) he appears quiet contented, but the amount of fish and meat he can dispose of seems likely to breed a famine. The boys brought in a large dog-fish the other day, it was over a foot long and so heavy that he could not hold it up to swallow it, but I put it into his mouth and held his head up and it disappeared from sight.

I also have a fine live Snow Owl, which was captured near here, Apr. 15. Pretty late in the season was it not? Two more were killed near the same place last winter.

Yours truly, E. L. Brown, Durand, Wis.

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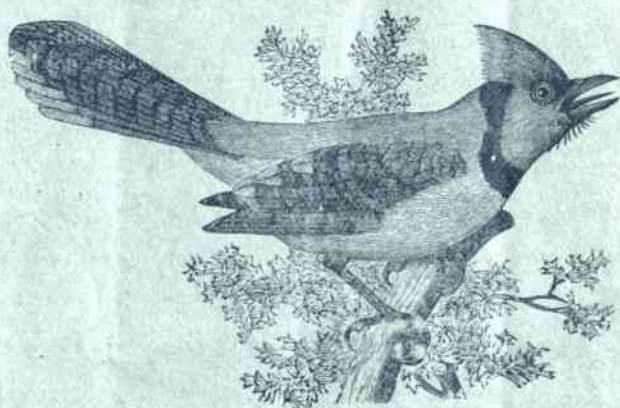
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